PROGRESS IN IMPLEMENTING A SYSTEM FOR SUMMARIZING
SELECT TREE RECORDS AND STATUS INFORMATION

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Abstract .--A system for summarizing select tree records and current
status information has been implemented in the eastern and mid-western
United States. Participants receive printouts that list pertinent data
for each select tree included in the cooperating tree improvement
programs. These printouts provide a compact recordkeeping system,
general information on the status of other programs, and information
necessary to initiate exchanges of plant materials. Anyone working with
a tree improvement program is invited to participate.

Additional keywords: Automatic data processing.

During this past year, the Eastern Region and the Northeastern Area
State and Private Forestry, Forest Service, U.S.D.A. have implemented
a system to summarize select tree records and status information. The
objective is to provide all participating cooperators with a list of
plant materials being used in forest tree improvement programs within
the twenty state area extending from Maine to Minnesota, south to
Missouri and east to Maryland, and the eastern Canadian Provinces. This
paper describes the system as it evolved, and reports on our progress
to date.

Many organizations, including states, provinces, federal agencies,
industries, colleges, and universities have initiated tree improvement
programs within the past few years. These efforts include several
species, and vary a great deal in scope and intensity. The number of
selections within a species, however, are often limited due to
financial restraints and political boundaries. The genetic base could
easily be broadened if program coordinators had access to a list of
plant materials being used in similar programs. Of equal importance,
the list would help to identify the original selector and location of
the plant material thus reducing the chance of obtaining identical
genotypes from participating cooperators.

Following discussions at the Twenty-Third Northeastern Forest Tree
Improvement Conference (Miller 1976), a survey conducted by the authors
indicated there was interest in establishing a Select Tree Register and
Status Report. Instructions, codes, and report forms were developed and
sent to the potential cooperators. Interested parties transferred their

select tree data from their respective forms to the Fortran Coding
Sheet (Figure 1). Data essential to the program includes tree
number and codes for state, agency, species, originator, status, and
control. An accession number, critical to running the program, must be
assigned to each selection by the organization coordinating the work.
Other desirable information includes the county code, latitude,
longitude, selection objectives, and statistics on the selected trees.

Completed coding forms were received from six cooperators. The data
was keypunched as submitted and run through the computer. Each
participant received a copy of the Select Tree Register and Status Report.

The Select Tree Register provides a list of all trees reported by the
cooperators with pertinent data for each tree. The trees are grouped by
agency and national forest, and by species within each agency and national
forest. Only one species is printed on a page. The original location of
the selected tree and the agency that made the original selection are
identified. A sample page from the Register (Figure 2) shows a partial
list of black walnut selections in the Purdue University program.

The Status Report (Figure 3) shows current status information for the
trees listed in Figure 2. This report includes the basic locations and
tree identification information. It shows if the tree is alive or dead,
how it has been used in the overall program--seed orchard, evaluation
plantations, etc., if seed has been collected from an individual tree
 (one X), if there is sufficient seed in storage to establish evaluation
plantations (two X's), and identifies those trees that are included in
other programs with different (alias) numbers.

The present Registers include 4,067 individual tree selections
 (Table 1). These trees are located in twenty-five states and three
Canadian Provinces.

These data are stored on tapes, and will be updated during the first
quarter of 1977. The present cooperators will be able to update their
existing data and to add new select tree information to the system. New
participants are most welcome to include their select tree data in the
system at this time, too. We are pleased with the initial response and
hope you too will participate in the future.

LITERATURE CITED

Miller, R.G. 1976. A system for summarizing superior tree records and
status information. In Twenty-Third Northeastern Forest Tree Improvement
Conference Proceedings, p.143-149.

U.S. DEPARTMENT OF AGRICULTURE
FORTRAN CODING

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Select Tree Register

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Accession Number	$ STATE	AGENCY	COUNTY	RANGER DIST	TREE NO	SPECIES	AGE AT DBH	TOTAL HT	HT TO 8" TOP	DBH	STEM VOL	APICAL DOM	% SUP. HT	% SUP. HT TO 8"	% SUP. STEM VOL	% SUP. APICAL DOM	SEL. OBJ. PRI SEC	LONGITUDE DEG	LATITUDE DEG MIN	S TREE RANGD INATORS	OS REGD CROP/SE X	ELEVATION	DATE	STATUS	STATUS	CONTROL

Acc. No.	$	AGENCY						TOT														ELEV			STATUS	CONTROL
6 00 0 1	8	15 b/				1 60 2														15					21 12	9 1
6 00 1 1	8	15				9 60 2														15					21 12	9 1
6 00 2 1	8	15				1 6 60 2														15					21 19	9 1
6 00 3 2	6	15				3 1 60 2														15					21 16	9 1
6 00 4 1	8	15				3 6 60 2														15					21 16	9 1
6 00 5 1	8	15				3 9 60 2														15					21 12	9 1
6 00 6 1	8	15				4 1 60 2														15					21 16	9 1
6 00 7 1	8	15				4 4 60 2														15					21 16	9 1

Figure 1.--Coding sheet showing format and actual data.

a/ These items must be completed.
b/ Agency code 15 = Purdue University.

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SELECT TREE REGISTER BY AGENCY, SPECIES, AND ACCESSION NUMBER
JUN 29, 1976

ACCESS NO.	SPEC	ST-CTY-AGENCY-DIST-	AGENCY TREE NO.	AGE	HEIGHT TOT-MER (FEET)	DSH	STEM VOL (CU FT)	APC DOM (%)	% SUPERIORITY HEIGHT TOT-MER	VOL	APC DOM	SELECT OBJECTV PRI-SEC	LONGI TUDE DEG	LATI TUDE ST DEG-MIN AND	TYPE IN ATUR	ORIG SEED CROH SEX	ELEVA TION (FT)	DATE MO/YR
6000	602	18- 0-15-0	1	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6001	602	18- 0-15-0	9	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6002	602	18- 0-15-0	16	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6003	602	26- 0-15-0	31	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6004	602	18- 0-15-0	36	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6005	602	18- 0-15-0	39	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6006	602	18- 0-15-0	41	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6007	602	18- 0-15-0	44	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6008	602	18- 0-15-0	46	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6009	602	18- 0-15-0	49	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6010	602	18- 0-15-0	55	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6011	602	18- 0-15-0	63	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6012	602	18- 0-15-0	68	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6013	602	18- 0-15-0	71	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6014	602	18- 0-15-0	82	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6015	602	18- 0-15-0	86	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6016	602	18- 0-15-0	89	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6017	602	18- 0-15-0	93	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6018	602	18- 0-15-0	95	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6019	602	18- 0-15-0	98	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6020	602	18- 0-15-0	102	0	0	0	.0	0	0 0	0	0	0 0	.00	0 0	0	15	0	0	0/ 0
6021	602	18- 0-15-0	107	0	0	0	.0	0	0 0	0	0		.00	0 0	0	15	0	0	0/ 0
6022	602	18- 0-15-0	113	0	0	0	.0	0	0 0	0	0	0 0	.00		0	15	0	0	0/ 0
6023	602	18- 0-15-0	118	0	0	0	.0	0	0 0	0	0	0 0	.00	0	0	15	0	0	0/ 0
6024	602	18- 0-15-0	134	0	0	0	.0	0	0 0	0	0	0 0	.00	0		15	0	0	0/ 0

Figure 2.--Sample page from select tree register showing data from Figure 1.

SELECT TREE STATUS REPORT - JUN 29, 1976

ACC NO	S P E C	ST= CTY= AGEN= DIST=	TREE N	TREE BL	VEGETATIV PROPAGAT. IVE GRAFT CUT	SEED CUT 1/2 FULL NAL SIB SIR	ORCHARD	BRED APR	RES= ERVE	SEED STO 1/2 FULL STB SIR	EVAL 1/2 SIR	PLAN 1/2 FULL SIR	ALIAS NO.
6000	602	18- 0-15-0	1	YES	X	X	X				X		
6001	602	18- 0-15-0	6	YES	X	X	X				X		
6002	602	18- 0-15-0	16	YES	X	X	X						
6003	602	26- 0-15-0	31	YES	X	X	X			X	X	X	
6004	602	18- 0-15-0	36	YES	X	X	X			X	X	X	
6005	602	18- 0-15-0	39	YES	X	X	X				X		
6006	602	18- 0-15-0	41	YES	X	X	X			X	X	X	
6007	602	18- 0-15-0	44	YES	X	X	X				X	X	
6008	602	18- 0-15-0	48	YES	X	X	X			X	X	X	
6009	602	18- 0-15-0	49	YES	X	X	X			X	X	X	
6010	602	18- 0-15-0	55	YES	X	X	X			X	X	X	
6011	602	18- 0-15-0	63	YES	X	X	X				X		
6012	602	18- 0-15-0	68	YES	X	X	X				X		
6013	602	18- 0-15-0	71	YES	X	X	X			X	X	X	
6014	602	18- 0-15-0	42	YES	X	X	X			X	X	X	
6015	602	18- 0-15-0	36	YES	X	X	X				X		
6016	602	18- 0-15-0	89	YES	X	X	X				X		
6017	602	18- 0-15-0	93	YES	X	X	X				X		
6018	602	18- 0-15-0	95	YES	X	X	X			X	X	X	
6019	602	18- 0-15-0	98	YES	X	X	X			X	X	X	
6020	602	18- 0-15-0	102	YES	X	X	X			X	X	X	
6021	602	18- 0-15-0	107	YES	X	X	X				X		
6022	602	18- 0-15-0	113	YES	X	X	X						
6023	602	18- 0-15-0	116	YES	X	X	X						
6024	602	18- 0-15-0	118	YES	X	X	X			X	X	X	
6025	602	18- 0-15-0	119	YES	X	X	X				X		
6026	602	18- 0-15-0	124	YES	X	X	X				X		
6027	602	18- 0-15-0	129	YES	X	X	X						
6028	602	18- 0-15-0	130	YES	X	X	X						
6029	602	18- 0-15-0	132	YES	X	X	X						
6030	602	18- 0-15-0	133	YES	X	X	X				X		
6031	602	18- 0-15-0	134	YES	X	X	X				X		
6032	602	18- 0-15-0	135	YES	X	X	X				X		
6033	602	18- 0-15-0	136	YES	X	X	X						
6034	602	18- 0-15-0	137	YES	X	X	X				X		
6035	602	18- 0-15-0	138	YES	X	X	X						
6036	602	18- 0-15-0	108	YES	X	X	X						
6037	602	18- 0-15-0	72	YES	X	X	X				X		
6038	602	18- 0-15-0	73	YES	X	X	X				X		
6039	602	18- 0-15-0	78	YES	X	X	X				X		
6040	602	18- 0-15-0	79	YES	X	X	X				X		
6041	602	18- 0-15-0		YES	X	X					X		
6042	602	18- 0-15-0	145	YES	X	X	X						
6043	602	18- 0-15-0		YES	X	X	X						
6044	602	18- 0-15-0		YES	X	X	X						
6045	602	18- 0-15-0				X	X						
6046	602	18- 0-15-0				X	X						
6047	602	18- 0-15-0	63	YES	X	X	X						

Figure 3.-- Sample Page from select tree status report showing data from Figure 1.

Table 1.--<u>Number of selections by species</u>

Conifers		Hardwoods	
Species	Number of Selections	Species	Number of Selections
White spruce	350	Black cherry	201
Black spruce	152	Yellow poplar	143
Red spruce	12	Black walnut	612
E. white pine	914	Yellow birch	236
Red pine	86	Paper birch	108
Jack pine	468	White ash	26
Shortleaf pine	65	Green ash	13
Scotch pine	14	Sugar maple	106
Balsam fir	176	Red maple	26
Himalayan white pine	14	Silver maple	12
Misc. five needle pines	13	Basswood	65
Misc. conifers	3	Red oak	75
	2,267	White oak	29
		Black oak	17
		Scarlet oak	15
		Populus spp.	116
			1,800

Total selections = 4,067 (3,396, R-9, F.S.-U.S.D.A.; 671 Agencies)